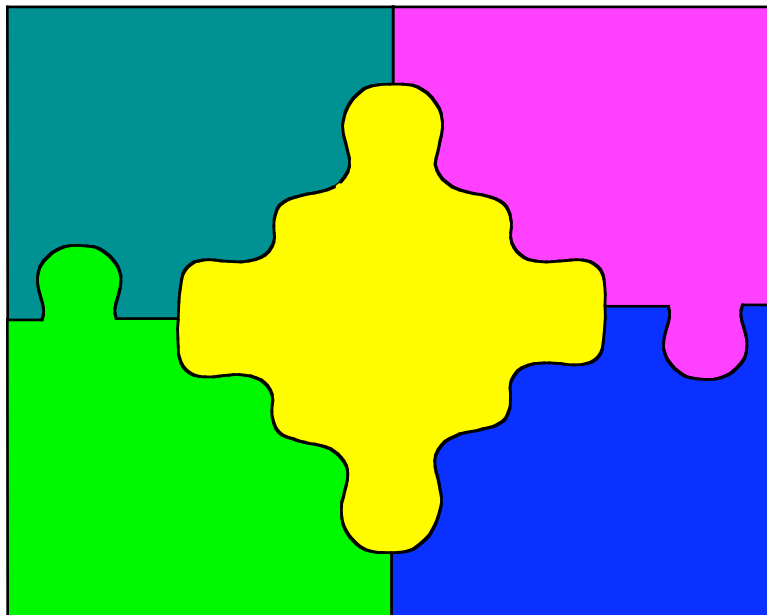


MATH, MATH AND MORE MATH

Child Care Training Guide
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N C Cooperative Extension



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MATH FOR CHILDREN THREE TO EIGHT YEARS OLD

Materials Needed:

1. Teaching Outline
2. Overhead Projector
3. Overheads and Handouts Provided

Objectives:

1. To emphasize the benefits of providing math activities in the classroom.
2. To review the fundamental math concepts that caregivers introduce to children daily.
3. To provide math activities and experiences that caregivers can use in their classroom.

Activities:

1. Questions Only
2. Nine Dots

Handouts:

1. Math Activities
2. Math as Reasoning

Overheads:

1. Why Math?
2. Four Basic Elements
3. Math as Connections
4. Math as Reasoning
5. Math as Problem- Solving

Resources:

Althouse, Rosemary. *Investigating Mathematics with Young Children*. New York: Teachers College, Columbia University.1994.

Berk, Laura E. & Winsler, Adam. *Scaffolding Children's Learning: Vygotsky and Early Childhood Education*. Washington, D.C.: National Association for the Education of Young Children. 1995

Eliason, Claudia & Jenkins, Loa. *A Practical Guide to Early Childhood Curriculum*. New York: Macmillan College Publishing Company.1994

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Hirsch, Elisabeth S. *The Block Book*. Washington, D.C.: National Association for the Education of Young Children. 1996.

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Scholastic: *Early Childhood Today*, March 1995, Vol.9 No.6 ISSN 1070-1214.

VIDEOS

"Blocks": National Association for the Education of Young Children.

"Appropriate Curriculum for the Young Child: The Role of the Teacher" : DAP Series.

MATH INTRODUCTION

(Background for instruction can be excerpted for introductory remarks)

Using Numbers

Children's experiences involve the daily use of numbers, helping them become aware of numbers early in life. Many experiences with self-correcting manipulative materials should be provided for young children. Caregivers working with children can take advantage of the counting potential in a child's play.

Facilitator: Share this example: If a child is playing with the pegboard, nesting cups, or large beads, the caregiver should count each item as it is finished. After children learn to associate a quantity with a number, then the caregiver begins to write down number symbols, or numerals, so the children can associate the quantity with the numeral.

The classroom and activities of young children should be filled with opportunities for using numbers that include simple numbers, counting and reasoning concepts. Children's understanding of numbers develops as they match, compare, sort or group and order.

Math should be integrated into all subjects taught. Number concepts can be explored through books and literature. Children will learn from concrete play about classification, comparison, ordering, one-to-one correspondence, and number recognition.

Facilitator: Review Overhead # 1 Why Math?

Math and number concepts can be taught in a theme unit, in individual or group activities, and as an integrated segment of an entire preschool curriculum.

Practical Applications

1. Give children engaging problems to solve in a cooperative group, for example, a caregiver can give a small group a group of counting bears and a set of numeral cards. Allow each group to count its object and find the representing numeral for the quantity.

2. Caregivers should always use math terms correctly in their vocabulary, as they listen to any misconceptions children have about math.

Children learn math easily through birthdays and ages. They become measures of time, abilities and achievements. A child may say, "I already did this when I was four" or "Yesterday I was four and today I am five."

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Numbers are familiar to children because they appear everywhere...speed limit signs, clocks, calendars pages, addresses etc. Have you ever thought how many opportunities there are for children to learn math through food experiences?

Children enjoy using numbers in repetition. Repetition reinforces the child's ability to begin to memorize the sequence and sounds of numbers. Recitation of numbers in the counting sequence has little or no meaning to young children but begins the cognitive process of understanding by first naming numbers. When children have an opportunity to count objects or one number per item, they will learn one-to one correspondence. Children need repetition of this kind of task to acquire this math skill.

Classification

Classification is a beginning math concept that can be taught in many ways, in different areas of the classroom environment. **To classify means to sort, or group by some common characteristic such as size, shape, color, number and other categories.** Classification is developmental and will evolve after naming objects.

*Facilitator: You may want to share examples of ways to classify: **A few examples of classifying are flowers by kind, fruits, vegetables, kinds of transportation, marbles by color and size and many other categories.***

Shape and Form

Shape and form are very important concepts for children to learn. Children see many shapes everyday in their environments, their bodies, and numerous geometric shapes. Children learn that most things have a shape. By age 5 or 6 years, children can differentiate geometric shapes- circles, squares and triangles. Concepts are formed through observation and manipulation.

Measurement

When and how do children learn measurement?

Measurement involves learning length, quantity, temperature, weight and time. Young children easily confuse different standards of measurement. It takes time and experience for young children to use units and standards of measurement correctly. A 4- year old child might step on the scale and say, " Look mom I weigh 40 inches!"

Summary

These are only the beginnings of math. Young children need physical activities to gain insight into math. Action games and rhythmic movement give insight to counting, numbers, adding and subtracting.

Engage children in practical aspects of math such actually moving and arranging materials. Blocks, sand and water tables and varied collections of objects for counting and arranging should be used for teaching aids. These materials are essential to self-initiated play as well as helping children grasp mathematical concepts. Always try to use what comes naturally.

THINK MATH

The math children will use in the future will be much more conceptual than the paper and pencil computation that meant math to many caregivers years ago. As technology expands, so will the computations in mathematics.

The four basic elements that are fundamental to all math learning include:
connections, problem-solving, reasoning, and communication. (Facilitator will show Overhead #2)

What this means for child care providers is that when you provide hands-on , child-directed experiences, always help children to think about math. There are so many skills and concepts to learn such as classification, seriation, patterning, measurement, and numbers to name a few. What follows are developmentally appropriate ways to make sure the “four “basics” formerly mentioned: namely, connection, problem- solving, reasoning, and communication are part of all the math experiences that you provide for in your classroom or family home.

Math Experiences.....

“ Trace all the way to my feet. Now let’s see how tall I am”

Measuring with links or blocks involves making connections, problem solving, reasoning, and communicating ---- the four fundamental aspects of math. Taken from the National Council of Teachers of Mathematics, Platform on Mathematics, 1989

MATH AS CONNECTIONS

Have you ever thought about why caregivers expose children to music, books, science and social studies and not take advantage of math concepts? Some activities and curriculum subject areas are interrelated. Math is in science, music, books, as well as social studies.

Language and science are curriculum areas that were separated from math in traditional teaching, but these subjects are interrelated in our current teaching practices. Math has been divided into units such as geometry, measurement and number operations. We are beginning to learn that in reality, math activities tap into several areas at once. If we teach math in isolation from other skills, children must take a great cognitive step to put them all back together again.

Facilitator: Share this example: In block play when two children build towers as tall as they are, they practice social and language skills as they work together. The children used measurement to decide how high the structure will go. Estimations are used to think about how many blocks the children will need to use and geometry to consider which shapes will stack the best on top of one another.

*At this time you may consider viewing the video tape **Blocks or DAP Series: Appropriate Curriculum for the Young Child: The Role of the Teacher.**(30 minutes) These videos are available through NAEYC for \$39.00 .*

Caregivers should take advantage of all math experiences that arise naturally in children's play. Math activities presented should relate to children's real-life experiences. Another idea is to use curriculum webs when planning to make sure connections are embedded in scheduled activities. Using a theme about rocks, for example, children can weigh them, categorize them and sort the rocks. .

A **curriculum web** is a way of planning and involving the children. This can be done with any ideas. First learn to listen to the children. As big ideas of interest emerge from their play and conversation, write the idea down on a large piece of easel paper. As related ideas are generated, draw a spoke from each idea to begin to categorize their ideas and organize them. This will allow you the teacher to use their ideas and things they are interested in to plan for their learning.

Keep the web going. Share it with parents. Post it in the classroom, add to it, let the children study it, and develop new ideas. (Share overhead #4 web attachment)

Practical Applications

1. Take a math skill and play it out around your classroom. You might involve the children in measuring plants and jotting down the results, add books about growth to your library corner, and your dramatic play area into a shoe store.
2. Always look for math concepts in literature. There are familiar stories such as the Three Bears and The Three Billy Goat Gruffs that use counting and sequencing. Many narrative stories can be used to reinforce the math skill of sequencing.

So caregivers should remember, when teaching by a topic, make every attempt to relate one mathematical experience to another. Always make mathematics relevant to children's lives and to other disciplines. A unit on "ourselves", for example, can be planned so that children compare lengths of their arms and legs, and other body parts (mathematics). Then children can talk about their families (social studies), learn to take care of their bodies (science), and listen to stories about children like themselves (language arts).

Facilitator: Review Overhead # 3 and handout #1 : Math as Connections and then ask participants to give examples of topics or units they have incorporated math and other subject areas.

HANDOUT #1: MATH ACTIVITIES

Math Activities.....

Many children under five have not mastered the concept of one-to-one correspondence. **Play games involving giving a cup to a child to see if the child can find the saucer to make a one-to-one correspondence.**

Children learn number concepts best through manipulating real objects.

Have children count how many apples are in the bag .

Using counting bears, have a child give each child in the class five bears. Play a hiding game and collect and count all the bears to be sure you found them all.

Use group meeting time or transition times to incorporate sorting, counting, classifying, and other math skills.

Involve children in spontaneous experiments, for example in block play: “Which car will go faster down the ramp? Which car will travel farther? How long should the ramp be?”

Take a field trip on which children seek out examples of math concepts in the world around them. Things to look for would be counting cars, shapes of trucks, read numbers on signs, look at the shapes of windows.

Take a field trip in your meeting location to list other ideas.

MATH AS PROBLEM-SOLVING

What is problem solving? It is an internal process in which children create new mental relationships as they interact with their environment and relate new understandings to previous ones.

Children must learn the following steps in problem- solving:

- Identify ourselves in order to problem solve (this means to identify a problem is being aware that something in the environment does not fit with what is already known).
- Be able to generate solutions.
- Choose a solution to the problem that is satisfactory to the individual.

From Jean Piaget's theory

In the field of early childhood, problem solving involves physical as well as mental action. Children learn the physical properties inherent in objects themselves when they manipulate objects. Jean Piaget, a child psychologist, defines this kind of knowledge as *physical knowledge*. ***Logio-mathematical knowledge*** occurs when children create relationships between and among objects. Children need to handle objects and observe how they react in order to create relationships. Math must proceed from the concrete to the abstract. Caregivers must provide materials for children to act on in order to learn to solve problems.

From Lev Semenovitch Vygotsky's theory

Vygotsky's theory indicates that children and teachers form a social organization in which they mutually construct shared mathematical knowledge. Through this process, children can grasp the meaning and usefulness of mathematical practices. Children will begin to see that mathematics is a community endeavor and not an adult imposed act. It is the caregiver's role to highlight conflicts between alternative interpretations or solutions to math. The caregiver must help children develop productive small- group cooperative relationships to interpret, understand, explain and justify mathematical constructions.

Children learn to solve problems from not only frequent interactions, but also cooperative learning. Cooperative learning transpires when children work in small groups and learn from their interactions. Research has determined that preschool children are more successful when they solve problems by cognitive conflict. It is important when children interact with different perspectives during cooperative learning and caregivers can help by these suggestions:

- Activities should be planned in which children have a shared goal
- Choose goals that are self-motivating and interesting to the children
- Be consistent so results of the child's actions are both visible and immediate.

So now we have referred to problem solving as a way to figure things out. It uses math in workable, real-life ways. Caregivers can help children develop the resourcefulness and flexibility in thinking and responding logically to personal situations as well as mastering tasks. Problem solving can begin in the classroom where children can solve hypothetical problems or real-life problems involving materials.

Practical Applications

1. Children might be able to estimate how many crackers are needed for snack, or figuring out the right size block for a firehouse.
2. On the playground, there are many opportunities for concepts of height, balance, spatial relationship that involve problem-solving.
3. Open –ended questions encourages a child to think and reason. Use phrases such as “Why do you think?” or “How many ways can you think of...?”

Sometimes a provider might present children with an imaginary problem situation. However, we must make sure that it is tied to the children’s experiences. For example, you might say, I had five pennies in my pocket on the way to school today. But I see that there is a hole in my pocket and now I have only one penny. How many pennies did I lose? Young children may need to role-play the situation to determine how many pennies disappeared and to count them. This becomes more concrete than abstract to the child.

Another interesting way to help children to problem solve would be to give each child in the block area a set of small blocks. Ask the children to think of their own individual ways to use all the blocks in a construction of their interest.

Remember caregivers, you must resist the temptation to offer your own answers and solutions. Be patient and give children time to solve or resolve their problems. Isn’t that we do in real-life.

Facilitator: Review Overhead # 4: Math as Problem- Solving to summarize discussion

ACTIVITY:QUESTIONS ONLY

Facilitator: Have participants pair up with the person beside them to become involved in this activity. One person takes the lead to get involve in a rapid paced conversation about something he/she wants in a store. The other person must answers everything his/her partner says or inquires about in the form of a question. For example, Person # 1 asks," Could you tell me where to find the toy department?" Person # 2 Have you been down aisle #5 sir?"

This process continues until someone forgets to answer the question with a question. Remember to stop and think before answering. This reinforces the use of questions but is also fun!

MATH AS REASONING

To what extent does a child have ability to reason? Piaget's theory of development, shows that children's ability to reason is limited by their egocentric view of the world. This means that children are capable of seeing the world from only one vantage point-their own- and tend to be unaware of other ways of looking at the world. They do not feel that they must justify their actions or thoughts, and they are unable to take the needs of others into consideration.

Two to three year old children are more egocentric than four to seven- year olds. Four and five year old children are aware that they reason. They know that thinking, remembering, dreaming, and knowing all are mental processes that require the use of the brain. A three- year old child is generally aware that thinking occurs in the brain.

If children are to reason mathematically, they must feel confident to trust and express their own thinking. The child's explanation may be only partially right, but what is important is that they feel comfortable about the process of taking the time to think.

Young children need many opportunities to use their reasoning skills at their own levels without fear of being wrong.

Facilitator: Review Overhead # 5: Math as Reasoning. Review suggestions for caregivers to promote reasoning and distribute Handout # 2.

MATH AS REASONING: HANDOUT # 2

A few ideas for caregiver:

- Ask questions that allow for children's own reasoning as they play with math: "How did you decide what hole to put the peg in next?" or "Why do you think your building fell down?" Sometimes children will modify or advance their thinking along the way.
- Pause for a few seconds after asking a question. "Waiting time" gives children a chance to collect and formulate their thoughts.
- Add the phrase "do you think" to questions starting with what, which one, or how many in order to encourage creative problem-solving.
- Make sure your questions sound more like an exchange of information or a shared problem-solving activity.
- Offer many hands-on experiences with counting and comparing objects in sets. For example, count the number of juices and the number of glasses at snack and notice that they are the same. Compare the number of children who are in school today and the number of children who want to play in the sand areas. Talk about which group has more or less.
- Be aware of your words, tone of voice, and non-verbal cues when listening to children's illogical responses. Try not to make them think their answers are wrong or "cute".
- Children should be given opportunities to discuss their reasoning with one another. Some children find it less intimidating to explain themselves to other children than to another adult.

MATH AS COMMUNICATION

Facilitator: Review Overhead # 6: Math as Communication

Math vocabulary or “mathematical talk” is often in children’s drawings and art models. Cognitive theory indicates that children draw what they know. Children’s drawings, and paintings increase in detail and complexity as they gain understanding, and have more experiences.

Representing mathematics through writing, painting, and drawing helps children to think about ideas, events, and relationships. Children represent their mathematical ideas through scribbles, letter- like forms or inventive spelling.

Practical Applications

1. Encourage children to draw or make letter- like forms.
2. Dictate what children want written(words help children clarify their thinking).

Language experiences that involve written and verbal expression are appropriate means of stimulating children to express mathematical understandings. Some children use words and numbers in their drawings to communicate ideas. Other children may express their mathematical understandings through story pictures.

Have you ever noticed how older preschool children relate to past or future events? Think in terms of the block area, when older preschool children are planning what they needs to build a store, garage and house similar to their community. They often communicate space, numbers and events that communicate mathematical representation.

Children are learning math vocabulary as a communication system that they use to explore and expand their knowledge of the world.

ACTIVITIES TO DO:

Solve math problems,” Let’s see, we have four cups of paint at each of the two easels, so I need 1-2-3-4-5-6-7-8 paint brushes total.”

Photograph children working with math materials. Ask children to write or dictate explanations of what they are doing. Display the photos.

MATH EVERYWHERE

Have you really stopped to think about how many areas in your classroom that you can set-up ideas for math learning? Nearly every area of your classroom environment can be used for math exploration.

Library Area

The Library Area can contain shape books, counting books, and books for classifying and comparing. There should even be books for solving problems. Children learn many math concepts when you integrate math and storytime. There are so many storybooks that are new and exciting to young children with math language and problem- solving. Children can learn to create their own books to enhance the book corner or library area. Here are a few books to consider:

Shape Books

- Circles, Triangles, and Squares* by Tana Hoban (Macmillan)
- Shapes*, by Jan Pienkowski (Harvey House)
- Changes, Changes* by Pat Hutchins (Macmillan)
- Boxes! Boxes!* By Leonard Everett Fisher (Viking)

Counting Books

- Over in the Meadow* illustrated by David Carter (Scholastic)
- So Many Cats* by Beatrice Schenk de Regniers (Houghton Mifflin)
- Anno's Counting Book* by Mitsumasa Anno (Harper & Row)

Classifying and Comparing Books

- The Very Hungry Caterpillar* by Eric Carle (Putnam)
- Is It Red? Is It Yellow? Is It Blue?* by Tana Hoban (Greenwillow Books)

Sand & Water Play Area

Another great area for learning math is in the Sand/Water Play Area. Children learn about shape, size, weight, and volume endlessly. Some materials that are necessary are a variety of containers, measuring cups, sieves, funnels spoons and buckets to name a few.

Dramatic Play Area

Think math when you select materials for your Dramatic Play Area. Select a variety of clothes to fit dolls, dress up clothing, dishes, pots, and pans of many sizes, colors, and shapes to lead to math discoveries.

To encourage one- to- one correspondence, every plate should be partnered with a spoon, knife, and fork. Each pot should have a lid. Each shoe should have a mate. Provide play money and a cash register to promote buying and selling scenarios. Display a simple scale, tickets for pricing items and an adding machine.

Art Area

Look for ways to build math in the Art Area. Children can learn to classify objects when they must put the green brush in the green can. Children can practice counting, one- to-one correspondence when there's a hole in an upside down egg carton for each pair of scissors or a peg on which to hang each smock.

Block Area

Math evolves as children play in the Block Area. Blocks play is a natural way for learning about solid shapes. As they look for blocks of a particular size or shape, they estimate, measure, and use geometry. During a building project such as making a garage, children problem- solve to decide how to make a door the right size for a toy truck

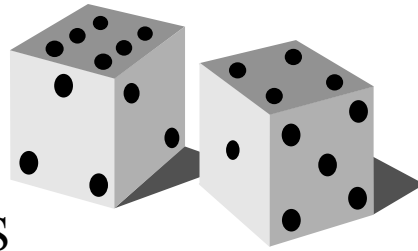
Offer blocks made of different materials such as wood, cardboard, and foam so children can easily compare, classify and use blocks to make patterns. When you label the block shelves with the actual block shape, cleanup becomes a matching activity. Also create rules about how high blocks should be stacked at cleanup.

Other Areas

Look for math opportunities beyond your learning centers. Wall space can be used for graphing of various attributes of objects, events or the children themselves. Children can explore measurement all over the room with tools such as links, cardboard tubes, and blocks. Post symbols of various kinds (not just numbers) to represent the number of children that can use a center at one time. In your classroom environment you can capitalize on the physical attributes of your space, such as patterns in your rugs, floor, series of windows and height of furniture, to reinforce math concepts. Always try to keep an eye out for other creative ways to incorporate math around your classroom.

The following are a series of extra activities to use in teaching during the learning session or as handouts with the participants.

SUMMARY HANDOUT:



HOW MATH DEVELOPS

This chart is being provided simply as a guide. Math follows a certain progression and children need to rediscover and refine “old” concepts and skills they build “new” ones. Also, as with all learning, the development of math skills is unique to each child. So, consider these stages in development as approximations of age.

TWO AND THREE YEAR OLDS MAY:

- Begin to understand the use of numbers through exploring objects.
- Begin to count three or four objects with no difficulty, but then count the same object twice, or skip one.
- Attempt to understand and begin to use many directional and relational words.
- Begin to put two or three objects in sequence but when confronted with more than three objects, revert to a trial – and – error- approach.
- Recognize a circle and other patterns and geometric shapes.
- Fit large piece puzzles in proper place, showing a sense of spatial relationships in geometric shapes.

THREE AND FOUR YEAR OLDS MAY:

- Begin to have a sense of time, realizing that birthday’s or other special celebrations occur every year.
- Look for familiar geometric shapes and recognize them in their environment.
- Enjoy sorting and classifying objects, by shape, color or size.
- Notice and compare similarities and differences.
- Begin to count 3 or 4 objects by pointing to them.

FOUR AND FIVE YEAR OLDS MAY:

- Count up to 10 to 20 things with less skipping or double counting.
- Spontaneously use math to solve everyday problems.
- Recognize more complex patterns.
- Begin to use concepts to compare objects by size, height and length.
- Enjoy playing games using numbers.
- Solve multiple piece puzzles by observing geometric shapes.
- Learn spatial relationships through the use of positional words, such as under, over, next to and behind.

FIVE AND SIX YEAR OLDS MAY:

- Begin to add small numbers in their heads.
- Classify objects according to more than one attribute.
- Begin to understand concepts in symbolic form representation, as with clocks.
- Begin to understand the sequence of numbers up to 20.
- Describe the steps taken in reaching a conclusion.

MATH ACTIVITIES

Sorting and Classifying

Purpose: Engage children in sorting and classifying the ingredients for a healthy snack.

Materials:

- Raisins
- Two varieties of low-sugar cereal
- Peanuts
- A large mixing bowl
- Some small mixing bowls
- Large spoons or scoops
- A paper plate for each child

Activity:

- **Let the children know that they will be preparing a healthy and energizing snack as a warm-up to this activity.** Have the children wash their hands and gather around the table.
- Place the separately filled mixing bowls with the raisins, peanuts and cereal on the table. Talk with the children about how the ingredients look similar or different.
- Have children participate in mixing all the ingredients together using spoons. Invite each child to place a scoop of the snack on his/her plate and sort into categories of size, shape, and color before they eat the snack.
- As the children eat, the caregiver asks, “How did you sort your snack?” encourage children to talk about their reasoning for the selections using big, small, round, and square.

Extension of the Activity:

Encourage the children to sort, and classify other objects in the classroom, such as the blocks, toys, and dramatic play items.

Counting and One to One Correspondence

Purpose: Children will learn the comparison of group of objects by counting and setting the table.

Materials for Three's

- Cups
- Plates
- Popsicle sticks with children's names
- Chairs

Materials for Four's and Five's

- Cups
- Plates
- Forks and Spoons
- Chairs

Activity:

- **For a warm-up, let the children know that everyone will be helping to set tables for snack in small groups.** Have the sanitized materials available and accessible. Have a small group of children prepare by washing their hands.
- Have the children sit at their group table with their name sticks. Ask one child to first count the children in the group. As a child counts the child named will lay their name stick on the table. The teacher will then have another child count the sticks on the table. Another child may count the chairs to see if the number corresponds with the sticks. Then the teacher will place a numerical number above the sticks in the middle of the table.
- Next the children will gather set of items (paper cups, plates etc.) to set the table according to the number of name sticks and or the chairs at the table. The children will be asked to place one item at each place setting for a child to have lunch.
- Once the children have completed their task you may ask each child to go around the table and count their place setting item to see if it corresponds to the number of name sticks (children in the group) and chairs at the table.
- Children should have the opportunity to participate in this activity several times in order to learn one- to- one correspondence. Use this a routine activity with setting out mats for circle time, helpers chart, preparing for a field trip etc.

MEASUREMENT

A Shadow-Measuring Activity

Purpose: To enable children to use math skills of measurement, estimation, and prediction to experiment with their shadows.

Materials:

- Crayons or markers
- Scissors
- Colored chalk
- Masking tape
- Chart paper
- Yarn, string, or plastic links
- Tape measurer, and other measuring tools

Warm-up Activity

On a clear day, take a small group of children outside for a “shadow hunt”. Have the children look for shadows made by trees and play structures. Encourage children to play and experiment with their own shadows. Ask the children to pair up and trace and measure their shadows.

Activity:

- Show children how one child in each pair can stand in the sun on a hard surface, while the other child uses chalk to trace the shadow.
- Ask the children to trade places when they finish, so everyone has a shadow tracing.
- Encourage children to think of ways to measure the shadows, then invite them to test out their ideas.
- Help each pair measure their shadows using material they chose. One child can hold a piece of yarn or other material at the head of the shadow while the other stretches it to the bottom. Help cut the yarn and or material so that each child will have a length of the material that represents the length of his or her shadow.
- Encourage children to predict whether their shadow lengths are longer, shorter, or the same as their own bodies, and other objects they see.
- Show the children how to measure lengths of materials against objects to test their predictions.

SEQUENCING ACTIVITY

Purpose: Children will learn to create timelines.

Small Group Size

Materials:

- Crayons and markers
- Sheets of different colored construction paper
- A long piece of string or a clothes hanger
- Clothespins or tape
- Polaroid camera (preferred) and film

Activity:

- Begin with a warm-up activity. Read a familiar book to your children. Ask the children to name the events in the story. Clues will help children think of any events that they forget. List their ideas on a chart. Talk to the children about the order in which the events happened.
- Explain to the children that you are going to take pictures of things you do at school. Concentrate on one event such as morning routines or preparation for lunch.
- Photos should be taken during the selected event. Involve the children in this activity by allowing them to take turns holding the camera and deciding what pictures to take. Make sure to include pictures of everyone in the class.
- Share the photos with the children. Enjoy talking about the photos and involve the children in helping you select the photos that best represent their activities.
- Now use the pictures to create a timeline. Ask the children to begin sequencing the photos by asking, “What is the first thing we do when we get to school? What comes next? Then what do we do next?”
- Mount the photos on construction paper and using a hanger or string with clothespins, position the photos at children’s eye-level on a vacant wall or bulletin board.
- Once you have completed this timeline activity encourage the children to work in pairs practicing the activity again.

Children may want to make a photo album of the picture they did not use of their class friends.

WEB PLAN

